THE CLAIMS DEFINING THE INVENTION ARE AS FOLLOWS:

1. A gate for controlling passage through an opening including:

a first support means located on one side of the opening;

a second support means located on the other side of the opening;

at least one elongate member, having a first and a second end, extendable across the opening between said first and second support means;

a first drive means to draw in said elongate member to thereby restrict passage through said opening; and

a control means for coupling and decoupling said first drive means; wherein decoupling of said first drive means allows for release of said at least one elongate member to thereby enable passage through said opening and coupling of said first drive means allows for drawing in said at least one elongate member to thereby restrict passage through said opening.

2. A gate as claimed in claim 1 wherein said elongate member is a cable, chain, rope, cord, rod or pipe provided with flexible end fittings.

3. A gate as claimed in claim 1 or claim 2 wherein said first and/or said second support means are posts.

4. A gate as claimed in any preceding claim wherein said control means is located substantially wholly within one of said first or second support means, to thereby limit access to said control means.

5. A gate as claimed in any preceding claim wherein said first drive means is located substantially wholly within one of said first or second support means, to thereby limit access to said first drive means

6. A gate as claimed in any preceding claim further including a first line connecting said first end of said at least one elongate member to said first drive means such that said first drive means operates to draw in said first line thereby drawing in said at least one elongate member.

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7. A gate as claimed in claim 6 wherein said first line is a steel or synthetic cable or strap.

8. A gate as claimed in any preceding claim wherein said elongate member is a 10mm stainless steel wire rope.

9. A gate as claimed in any preceding claim wherein said first line is a 1.6mm stainless steel wire rope.

10. A gate as claimed in any preceding claim further including a locking means to prevent unwanted release of said at least one elongate member.

11. A gate as claimed in claim 10 wherein said locking means includes a latch means adapted to engage a termination means attached to said at least one elongate member.

12. A gate as claimed in claim 11 wherein said termination means is a thimble assembly, hook assembly, eye assembly, t-bar assembly or clevises assembly.

13 A gate as claimed in claim 11 wherein said latch means is a pivoting pin.

14. A gate as claimed in any one of claims 11 to 13 wherein said first line is attached to said termination means.

15. A gate as claimed in any one of claims 11 to 14 further including a latch release means.

16. A gate as claimed in claim 15 wherein said latch release means includes:

a release lever adapted to release said latch means;

a first and a second spring each fixed at one end;

a belt passing around a pulley means and connecting said first spring to said second spring; and

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a release line attached to said release lever and said belt.

17. A gate as claimed in claim 15 or 16 wherein said latch release means is activated by said first drive means.

18. A gate as claimed in any one of claims 15 to 17, wherein said release lever further includes a return spring adapted to return said release lever to a locked position.

19. A gate as claimed in any one of claims 15 to 18 wherein said release line is a 1.6mm stainless steel wire rope.

20. A gate as claimed in any one of claims 6 to 19 wherein said first drive means includes a winch drum adapted to reel in and reel out said first line.

21. A gate as claimed in claim 20 wherein said winch drum is fixed to a drive shaft.

22. A gate as claimed claim 20 wherein said winch drum is adapted to freely rotate on a drive shaft; and said first drive means further includes:

a drive collar rotatable with, and slidable along, said drive shaft; and

an engaging means adapted to enable said drive collar to engage and disengage said winch drum; wherein disengaging said winch drum allows for release of said first line, and engaging said winch drum allows for drawing in said first line.

23. A gate as claimed in claim 22 wherein said drive collar is located on said drive shaft by a pin extending through a slot in said drive shaft.

24. A gate as claimed in claim 22 or claim 23 wherein said engaging means includes cooperating extending dogs and recesses on said drive collar and winch drum.

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25. A gate as claimed in any one of claims 22 to 24 further including a third spring adapted to hold said drive collar and winch drum out of engagement.

26. A gate as claimed in any one of claims 22 to 25 wherein said pulley means further includes a face cam adapted to engage said drive collar, such that any imbalance between said first and second spring acts to hold said face cam stationary, and said drive collar is forced by said face cam to move along said drive shaft to thereby engage or disengage said winch drum.

27. A gate as claimed in claim 26 wherein said face cam includes a ramp adapted to cooperate with protrusions on said drive collar.

28. A gate as claimed in claim 11 wherein said latch means includes
a latch or locking pin adapted to be released by a release lever;
a member attached via a ratchet means to a first drive means; and
a release line joining said release lever to said member.

29. A gate as claimed in claim 20, wherein said winch drum is adapted to freely rotate on a driveshaft; and said first drive means further includes: an assembly adapted to slide along and rotate with a drive shaft; said assembly including a pulley and clutch dog;

a plurality of cams, including a first and second cam;

a plurality of reaction plates, including a first and second reaction plate; wherein said first cam is adapted to engage said first reaction plate, to thereby engage said clutch dog with said winch drum; and said second cam is adapted to engage said second reaction plate, to thereby disengage said clutch dog from said winch drum.

30. A gate as claimed in claim 29, wherein flanks on said cams extend down each face of said pulley.

31. A gate as claimed in any one of claims 11 to 30, further including a lock

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detect means adapted to sense when said gate is locked.

32. A gate as claimed in claim 31 wherein said lock detect means includes a sensor to detect when said latch means and said termination means are both in a locked position.

33. A gate as claimed in claim 32 wherein said sensor is activated by said termination means pivoting a sensing cam, mounted on said latch means, into engagement with said sensor.

34. A gate as claimed in any one of claims 10 to 33, wherein once said gate is locked, said first drive means is briefly activated in the unlock direction, without unlocking said gate, to thereby release tension on said first line.

35. A gate as claimed in any proceeding claims wherein during opening of the gate said first drive means is decoupled, thereby allowing the weight of said at least one elongate member to extract said at least one elongate member from said first drive means.

36. A gate as claimed in claim 35 further including a braking means to limit the speed of extraction of said at least one elongate member when said first drive means is decoupled.

37. A gate as claimed in any one of claims 6 to 34 wherein during opening of the gate said first drive means is decoupled, thereby allowing the weight of said at least one elongate member to extract said first line from said first drive means.

38. A gate as claimed in claim 37 further including a braking means to limit the speed of extraction of said first line when said first drive means is decoupled.

39. A gate as claimed in claim 38 wherein said braking means includes a resilient means.

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40. A gate as claimed in claim 38 or claim 39, when appended to claim 20, further including a finger assembly adapted to hold said first line against said winch drum.

41. A gate as claimed in any preceding claim wherein said second support means further includes a traction means to draw said at least one elongate member towards said second support means during release of said at least one elongate member.

42. A gate as claimed in claim 41 wherein said traction means includes an aperture in said second support means through which a first counterweight line may pass, one end of said first counterweight line being attached to said at least one elongate member, and the other end attached to a first counterweight.

43. A gate as claimed in claim 42 wherein said aperture is located a predetermined distance below said at least one elongate member and substantially equal to the distance between said second support means and a point where said first counterweight line is attached to said at least one elongate member.

44. A gate as claimed in any preceding claim wherein said at least one elongate member further includes at least one bar running along an end portion of said at least one elongate member, to thereby assist in the retraction of said at least one elongate member along a side of said second support means.

45. A gate as claimed in claim 44 wherein each, or a selection of each, elongate member includes at least one bar running along said end portion of the respective elongate member.

46. A gate as claimed in any preceding claim wherein said at least one elongate member is connected to a bar pivotally attached to said second support means.

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47. A gate as claimed in any one of claims 1 to 40 wherein said first and/or second support means further includes a resilient means to draw said at least one elongate member towards said first and/or second support means during release of said at least one elongate member.

48. A gate as claimed in any one of claims 20 to 47 further including a tracking means to track said first line along said winch drum including:

a fixed pulley;

a second pulley mounted on an arm, said arm being spring loaded and capable of swinging;

wherein said first line tracks around said fixed pulley and said second pulley prior to being wound on to said winch drum.

49. A gate as claimed in claim 48 wherein said tracking means further includes a first limit stop to indicate a minimum load position.

50. A gate as claimed in claim 49 wherein said spring loaded arm holds said second pulley at said first limit stop when said gate is fully opened.

51. A gate as claimed in any one of claims 48 to 50 wherein said tracking means further includes a second limit stop adapted to detect an overload condition.

52. A gate as claimed in claim 51 wherein said second limit stop includes a sensor activated by said spring loaded arm and/or said second pulley.

53. A gate as claimed in any one of claims 6 to 52, further including a third line connecting said second end of said at least one elongate member to a second winch means such that said second drive means operates to draw in said third line thereby drawing in said at least one elongate member.

54. A gate as claimed in claim 53 wherein said third line is of the same construction as said first line.

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55. A gate as claimed in claim 53 or claim 54 wherein said second support means is constructed the same as said first support means.

56. A gate as claimed in any preceding claim wherein said first and second ends of said at least one elongate member are held approximately 750mm above the ground when in a locked position.

57. A gate as claimed in any preceding claim wherein said at least one elongate member is held approximately 550mm above the ground in the approximate middle of said opening when in a locked position.

58. A gate as claimed in any preceding claim wherein said first and/or second support means include a security lock system to prevent access to parts within said first or second support means, said security lock system including:

a top plate adapted to fit within said first or second support means;

at least one locking pin adapted to pass through said top plate and said first or second support means;

a locking plate adapted to fit over a tang mounted on said top plate and prevent removal of said at least one locking pin; and

a second locking means fitted to said tang to prevent removal of said locking plate.

59. A gate as claimed in claim 58 wherein said at least one locking pin is a high strength bolt, and said second locking means is a padlock.

60. A gate as claimed in any preceding claim further including a battery located wholly within said first and/or second support means to enable operation of said gate.

61. A gate as claimed in claim 60 further including an external power source connected to said battery and capable of recharging said battery.

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62. A gate as claimed in claim 61 wherein said external power source is mains power or a solar power source.

63. A gate as claimed in any one of claims 11 to 62 wherein said first end and said second end of said at least one elongate member are each attached to respective termination means, and said locking means includes respective latching means in said first and second support means to engage the respective termination means.

64. A gate as claimed in claim 63 wherein said first line and said third line are each attached to the respective termination means.

65. A gate as claimed in any preceding claim further including a hollow tube, split longitudinally at each end, and clamped onto said at least one elongate member.

66. A gate as claimed in claim 44, 45, 46 or 65, when appended to claim 11 wherein said termination means is orientated prior to clamping each end of said hollow tube or bar.

67. A gate as claimed in claim 65 when appended to claim 44 wherein said at least one bar is said hollow tube.

68. A gate as claimed in any preceding claim wherein said second end of said at least one elongate member is anchored to said second support means by a removable pin.

69. A gate as claimed in claim 68 wherein said removable pin is held in said second support means by a third locking means.

70. A gate as claimed in claim 69 wherein said third locking means is a padlock.

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71. A gate as claimed in any preceding claim wherein said padlock(s) are located within said first or second support means.

72. A gate as claimed in any preceding claim wherein said at least one elongate member, when in a locked position, is allowed to sag whilst still restricting passage through said opening.

73. A drive mechanism including:

a first and a second spring each fixed at one end;

a belt passing around a pulley means and connecting said first spring to said second spring;

a drive means to rotate said pulley means; and

a line attached from said belt to a device which said drive mechanism is adapted to operate.

74. A gate substantially as hereinbefore described with reference to the accompanying drawings.

75. A method of operating a gate substantially as hereinbefore described with reference to the accompanying drawings.

76. A gate for controlling passage through an opening including:

a first support means located on one side of the opening;

a second support means located on the other side of the opening;

at least one elongate member, having a first and a second end, extendable across the opening between said first and second support means, wherein said first and/or second end is joined to a termination means adapted to engage a locking means located in said first or second support means; and

a control means for releasing said at least one elongate member to thereby enable passage through said opening, and drawing said elongate member towards a first aperture in said first or second support means; wherein said elongate member remains substantially external to said first or second support means and little to none of said elongate member enters said first or second support means when said gate is in a locked or closed position to thereby restrict

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passage through said opening.

77. A gate as claimed in claim 76 wherein said elongate member is a cable, chain, rope, cord, rod or pipe provided with flexible end fittings.

78. A gate as claimed in claim 76 or claim 77 wherein said first and/or said second support means are posts.

79. A gate as claimed in any one of claims 76 to 78 wherein said termination means is a thimble assembly, hook assembly, eye assembly, T-bar assembly or clevises assembly.

80. A gate as claimed in any one of claims 76 to 78 wherein said control means is located substantially wholly within one of said first or second support means, to thereby limit access to said control means.

81. A gate as claimed in any one of claims 76 to 80 further including a first line connecting said first end of said at least one elongate member to a first drive means such that said first drive means operates to draw in said first line thereby drawing said at least one elongate member towards said first aperture.

82. A gate as claimed in claim 81 wherein said first line is a steel or synthetic cable or strap.

83. A gate as claimed in any one of claims 76 to 82 wherein said elongate member is a 10mm stainless steel wire rope.

84. A gate as claimed in any one of claims 76 to 83 wherein said first line is a 1.6mm stainless steel wire rope.

85. A gate as claimed in any one of claims 76 to 84 further including a locking means to prevent unwanted release of said at least one elongate member.

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86. A gate as claimed in claim 85 wherein said locking means includes a latch means adapted to engage said termination means attached to said at least one elongate member.

87 A gate as claimed in claim 86 wherein said latch means is a pivoting pin.

88. A gate as claimed in any one of claims 81 to 87 wherein said first line is attached to said termination means.

89. A gate as claimed in any one of claims 86 to 88 further including a latch release means.

90. A gate as claimed in claim 89, wherein said latch release means includes:

a release lever adapted to release said latch means;

a first and a second spring each fixed at one end;

a belt passing around a pulley means and connecting said first spring to said second spring; and

a release line attached to said release lever and said belt.

91. A gate as claimed in claim 89 or claim 90, wherein said latch release means is activated by said first drive means.

92. A gate as claimed in any one of claims 89 to 91, wherein said release lever further includes a return spring adapted to return said release lever to a locked position.

93. A gate as claimed in any one of claims 89 to 92 wherein said release line is a 1.6mm stainless steel wire rope.

94. A gate as claimed in any one of claims 81 to 93, wherein said first drive means includes a winch drum adapted to reel in and reel out said first line.

95. A gate as claimed in claim 94 wherein said winch drum is fixed to a drive

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shaft.

96. A gate as claimed in claim 94 wherein said winch drum is adapted to freely rotate on a drive shaft; and first drive means further includes:

a drive collar rotatable with, and slidable along, said drive shaft;

an engaging means adapted to enable said drive collar to engage and disengage said winch drum; wherein disengaging said winch drum allows for release of said first line, and engaging said winch drum allows for drawing in said first line.

97. A gate as claimed in claim 96 wherein said drive collar is located on said drive shaft by a pin extending through a slot in said drive shaft.

98. A gate as claimed in claim 96 or claim 97 wherein said engaging means includes cooperating extending dogs and recesses on said drive collar and winch drum.

99. A gate as claimed in any one of claims 96 to 98 further including a third spring adapted to hold said drive collar and winch drum out of engagement.

100. A gate as claimed in any one of claims 96 to 99 wherein said pulley means further includes a face cam adapted to engage said drive collar, such that any imbalance between said first and second spring acts to hold said face cam stationary, and said drive collar is forced by said face cam to move along said drive shaft to thereby engage or disengage said winch drum.

101. A gate as claimed in claim 100 wherein said face cam includes a ramp adapted to cooperate with protrusions on said drive collar.

102. A gate as claimed in claim 86 wherein said latch means includes

a latch or locking pin adapted to be released by a release lever;

a member attached via a ratchet means to a first drive means; and

a release line joining said release lever to said member.

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103. A gate as claimed in claim 94, wherein said winch drum is adapted to freely rotate on a drive shaft; and said first drive means further includes:

an assembly adapted to slide along and rotate with a drive shaft; said assembly including a pulley and clutch dog;

a plurality of cams, including a first and second cam;

a plurality of reaction plates, including a first and second reaction plate; wherein said first cam is adapted to engage said first reaction plate, to thereby engage said clutch dog with said winch drum; and said second cam is adapted to engage said second reaction plate, to thereby disengage said clutch dog from said winch drum.

104. A gate as claimed in claim 103, wherein flanks on said cams extend down each face of said pulley.

105. A gate as claimed in any one of claims 85 to 104, further including a lock detect means adapted to sense when said gate is locked.

106. A gate as claimed in claim 105 when appended to claim 86, wherein said lock detect means includes a sensor to detect when said latch means and said termination means are both in a locked position.

107. A gate as claimed in claim 106 wherein said sensor is activated by said termination means pivoting a sensing cam, mounted on said latch means, into engagement with said sensor.

108. A gate as claimed in any one of claims 85 to 108, wherein once said gate is locked, said first drive means is briefly activated in the unlock direction, without unlocking said gate, to thereby release tension on said first line.

109. A gate as claimed in any one of claims 76 to 108 wherein during opening of the gate said first drive means is decoupled, thereby allowing the weight of said at least one elongate member to extract said from said first drive means.

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110. A gate as claimed in claim 109 further including a braking means to limit the speed of extraction of said at least one elongate member.

111. A gate as claimed in any one of claims 81 to 108 wherein during opening of the gate said first drive means is decoupled, thereby allowing the weight of said at least one elongate member to extract said first line from said first drive means.

112. A gate as claimed in claim 111 further including a braking means to limit the speed of extraction of said first line when said first drive means is decoupled.

113. A gate as claimed in claim 112 wherein said braking means includes a resilient means.

114. A gate as claimed in claim 112 or claim 113 when appended to claim 94, further including a finger assembly adapted to hold said first line against said winch drum.

115. A gate as claimed in any one of claims 76 to 114 wherein said second support means further includes a traction means to draw said at least one elongate member towards said second support means during release of said at least one elongate member.

116. A gate as claimed in claim 115 wherein said traction means includes a second aperture in said second support means through which a first counterweight line may pass, one end of said first counterweight line being attached to said at least one elongate member, and the other end attached to a first counterweight.

117. A gate as claimed in claim 116 wherein said second aperture is located a predetermined distance below said at least one elongate member and substantially equal to the distance between said second support means and a point where said first counterweight line is attached to said at least one elongate

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member.

118. A gate as claimed in any one of claims 76 to 117 wherein said at least one elongate member further includes at least one bar running along an end portion of said at least one elongate member, to thereby assist in the retraction of said at least one elongate member along a side of said second support means.

119. A gate as claimed in claim 118 wherein each, or a selection of each, elongate member includes at least one bar running along said end portion of the respective elongate member.

120. A gate as claimed in any one of claims 76 to 119 wherein said at least one elongate member is connected to a bar pivotally attached to said second support means.

121. A gate as claimed in any one of claims 76 to 114 wherein said first and/or second support means further includes a resilient means to draw said at least one elongate member towards said first and/or second support means during release of said at least one elongate member.

122. A gate as claimed in any one of claims 94 to 121 further including a tracking means to track said first line along said winch drum including:

a fixed pulley;

a second pulley mounted on an arm, said arm being spring loaded and capable of swinging;

wherein said first line tracks around said fixed pulley and said second pulley prior to being wound on to said winch drum.

123. A gate as claimed in claim 122 wherein said tracking means further includes a first limit stop to indicate a minimum load position.

124. A gate as claimed in claim 123 wherein said spring loaded arm holds said second pulley at said first limit stop when said gate is fully opened.

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125. A gate as claimed in any one of claims 122 to 124 wherein said tracking means further includes a second limit stop adapted to detect an overload condition.

126. A gate as claimed in claim 125 wherein said second limit stop includes a sensor activated by said spring loaded arm and/or said second pulley.

127. A gate as claimed in any one of claims 81 to 126, further including a third line connecting said second end of said at least one elongate member to a second drive means such that said second drive means operates to draw in said third line thereby drawing said at least one elongate member towards a third aperture in said second support means.

128. A gate as claimed in claim 127 wherein said third line is of the same construction as said first line.

129. A gate as claimed in claim 127 or claim 128 wherein said second support means is constructed the same as said first support means.

130. A gate as claimed in any one of claims 76 to 129 wherein said first and second ends of said at least one elongate member are held approximately 750mm above the ground when in a locked position.

131. A gate as claimed in any one of claims 76 to 130 wherein said at least one elongate member is held approximately 550mm above the ground in the approximate middle of said opening when in a locked position.

132. A gate as claimed in any one of claims 76 to 131 wherein said first and/or second support means include a security lock system to prevent access to parts within said first or second support means, said security lock system including:

a top plate adapted to fit within said first or second support means;

at least one locking pin adapted to pass through said top plate and said

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first or second support means;

a locking plate adapted to fit over a tang mounted on said top plate and prevent removal of said at least one locking pin; and

a second locking means fitted to said tang to prevent removal of said locking plate.

133. A gate as claimed in claim 132 wherein said at least one locking pin is a high strength bolt, and said second locking means is a padlock.

134. A gate as claimed in any one of claims 76 to 133 further including a battery located wholly within said first and/or second support means to enable operation of said gate.

135. A gate as claimed in claim 134 further including an external power source connected to said battery and capable of recharging said battery.

136. A gate as claimed in claim 135 wherein said external power source is mains power or a solar power source.

137. A gate as claimed in any one of claims 86 to 136 wherein said first end and said second end of said at least one elongate member are each attached to respective terminations means, and said locking means includes respective latching means in said first and second support means to engage the respective termination means.

138 A gate as claimed in claim 137 wherein said first line and said third line are each attached to the respective termination means.

139. A gate as claimed in any one of claims 76 to 138 further including a hollow tube, split longitudinally at each end, and clamped onto said at least one elongate member.

140. A gate as claimed in claim 118, 119, 120 or 139, when appended to claim

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86 wherein said termination means is orientated prior to clamping each end of said hollow tube or bar.

141. A gate as claimed in claim 139 when appended to claim 118 wherein said at least one bar is said hollow tube.

142. A gate as claimed in any one of claims 76 to 141 wherein said second end of said at least one elongate member is anchored to said second support means by a removable pin.

143. A gate as claimed in claim 142 wherein said removable pin is held in said second support means by a third locking means.

144. A gate as claimed in claim 143 wherein said third locking means is a padlock.

145. A gate as claimed in any one of claims 76 to 144 wherein said padlock(s) are located within said first or second support means.

146. A gate as claimed in any one of claims 76 to 145 wherein said at least one elongate member, when in a locked position, is allowed to sag whilst still restricting passage through said opening.

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